List of Contents

NUMBER 1

i Softstrip® data strip containing the table of contents of this issue

Charles M. Parks, C. Michael Collins and Gerald R. Graves 1 Parallel processing: a critical element in applying artificial intelligence to manufacturing

Henry C. Co and Gang Li 9 A mean value analysis model for job shops and job shop-like systems

D. L. Carver 19 Modification rates during testing

Uma Kumar and Vinod Kumar 27 An inventory model with an uncertain match between the amount requisitioned and the amount received

Chen-Hua Chung, In-Jazz Chen and George L. Y. Cheng 37 Planning horizons for the production smoothing problem: a heuristic search procedure

Biman K. Ghosh and Richard A. Wysk 45 Post-optimality analysis of performance of computer networks in flexible manufacturing systems

Biman K. Ghosh and Richard A. Wysk 55 Models for communication system performance in computer integrated manufacturing systems

P. K. Mishra and P. C. Pandey 65 Simulation studies of flexible manufacturing systems using statistical design of experiments

R. P. Mohanty, D. Dey and R. V. Kulkarni 75 A computer algorithm for determining optimal buffer size in a serial flow production system

T. C. E. Cheng 87 A comparative study of some non-cost-based lot-sizing heuristics

S. Chakravarthy and R. Parthasarathy 97 A finite capacity queueing model with primary and secondary jobs

Francis J. Vasko 109 A computational improvement to Wang's two-dimensional cutting stock algorithm

Jorge Luis Romeu 117 A small sample Monte Carlo study of four system reliability bounds

Bhaba R. Sarker 127 Simulating a Just-in-Time production system

Richard L. Luebbe 139 A performance interval for the micro–mainframe relationship for scientific and mathematical programming applications

Anil Mital and Waldemar Karwowski 145 Prediction of isometric and isokinetic strengths of males in teamwork: further applications of GMDH

Mukasa E. Ssemakula and **Ramesh M. Rangachar** 161 The prospects of process sequence optimization in CAPP systems

Paul F. Petersen and **R. P. Davis** 171 Microcomputer system specification: a component selection methodology

Rajan Batta and **Wilfred V. Huang** 179 On the synthesis of advertising and relocation decisions for a facility

Mahesh H. Dodani and **A. J. G. Babu** 189 Karmarkar's projective method for linear programming: a computational appraisal

Announcements I

NUMBER 2

i Softstrip® data strip containing the table of contents of this issue

Acknowledgements iii

Gordon S. Kalley and **Kevin J. McDermott** 207 Using expert systems to incorporate the principles of motion economy as a means of improving robot manipulator path generation

B. Bidanda, J. Rubinovitz and **S. Raman** 215 Development of a spatter index for automated welding inspection using computer vision

Anand S. Kunnathur and **Rafael Solis** 225 Multiple copy file allocation and placement in a distributed information network

Jocelyn R. Drolet and **Colin L. Moodie** 235 A state table innovation for cell controllers

Kyung S. Park and **Dae H. Kim** 245 Stochastic inventory model for two-echelon distribution systems

Nicholas C. Georgantzas and **Christian N. Madu** 257 Maintenance float policy estimation with imperfect information

Bum-il Lee and **Dong-wan Tcha** 269 An iterative procedure for fuzzy programming problems with linear fractional objectives

Jorge Haddock and **Todd A. Hartshorn** 277 A decision support system for specific machine selection

William P. Darrow and **Jatinder N. D. Gupta** 287 Integrating group technology and MRP systems through lot sizing and scheduling

M. K. Khare and **C. M. Sadiwala** 297 Microprocessor based planning and controlling of material requirements in a multilevel production–inventory system

S. M. Alexander, C. M. Vaidya and K. A. Kamel 307 An architecture for sensor fusion in intelligent process monitoring

Chuk Yau and **Jimmy Liu** 313 A generalised software system shell for decision support system development

Avi Rushinek and **Sara Rushinek** 321 Manufacturing resource planning systems (MRP) case study: feature selection system (FSS) for microcomputer users and manufacturers

Linda Weiser Friedman 329 The multivariate metamodel in queuing system simulation

Jessie C. Fortenberry, Amitava Mitra and **Robert D. M. Willis** 339 A multi-criteria approach to optimal emergency vehicle location analysis

Technical Note
Moshe Sniedovich 349 A quick and elegant solution to an AOQ computer programming task

NUMBER 3

i Softstrip® data strip containing the table of contents of this issue

William A. Hyman, Waymon L. Johnston and **Steven Spar** 355 Legal liability and system safety applied to expert systems

Hamid R. Parsaei and **Mickey R. Wilhelm** 363 A justification methodology for automated manufacturing technologies

Ronald L. Ketcham, Eric M. Malstrom and **Keith L. McRoberts** 375 A comparison of three computer assisted facilities design algorithms

Rafael G. Moras and **Eric L. Blair** 387 Fitting exponential smoothing models with computer graphics

B. Malakooti 407 A gradient-based approach for solving hierarchical multi-criteria production planning problems

Hamid K. Seifoddini 419 Single linkage versus average linkage clustering in machine cells formation applications

J. Betts and **K. I. Mahmoud** 427 Identifying multiple solutions for assembly line balancing having stochastic task times

Hon-Shiang Lau and **Long-Geng Zhao** 447 An efficient computer procedure for constructing the compound lead-time–demand distribution

A. M. Genaidy, M. M. Ayoub and **J. S. Duggal** 455 A microcomputer-based ergonomic software for the design and evaluation of frequent manual lifting tasks

NUMBER 4

	i	Softstrip® data strip containing the table of contents of this issue
K. Raja Gunasingh and **R. S. Lashkari**	469	The cell formation problem in cellular manufacturing systems—a sequential modelling approach
Yang B. Park and **C. Patrick Koelling**	477	An interactive computerized algorithm for multicriteria vehicle routing problems
Celestine A. Ntuen, Eui H. Park and **Jung H. Kim**	491	KIMS—a knowledge-based computer vision system for production line inspection
Alan Stulman	509	A "static" optimal strategy for a service robot: a one dimensional case
Rodolfo Matamoros, Gerald R. Graves, Avinash Waikar and **Magd Zohdi**	515	A protocol for distributed simulation on a micro-computer network
Mohammed A. Mustafa	525	An integrated hierarchical programming approach for industrial planning
Horng-Ming Su and **Voratas Kachitvichyanukul**	535	A natural language system to aid simulation model formulation
Kyung S. Park	545	Stochastic (Q, r) inventory model with customer reneging
Heeseok Lee	553	Time and cost tradeoff for distributed data processing
Raymond F. Boykin and **Reuven R. Levary**	559	A simulation model for risk analysis of toxic chemical storage
Matthew Lybanon	571	Comment on "statistical calibration when both measurements are subject error: a simulation study"
I. Sabuncuoglu and **D. L. Hommertzheim**	575	Expert simulation systems—recent developments and applications in flexible manufacturing systems
Jay Liebowitz and **Laura C. Davis**	587	Sharing the solution: the need for generic artificial intelligence decision support development tools in battle management